

What is claimed is:

1. An aqueous coating composition for use in cooling coated structures, comprising from about 23% to about 43% of an inorganic, inert and hygroscopic material; from about 5% to about 15% of kaolin clay; from about 1% to about 3% of ammonia; from about 5% to about 9% of styrene; from about 1% to about 5% of an inorganic pigment; from about 2% to about 6% of silicon dioxide; and from about 40% to 60% of water.
2. An aqueous composition according to claim 1, wherein said inorganic, inert and hygroscopic material is calcined diatomite, diatomaceous earth.
3. An aqueous composition according to claim 1, wherein said inorganic, inert and hygroscopic material is silica gel.
4. An aqueous composition according to claim 1, further comprising fungicides; cellulose derivatives; dispersants; emulsifying agents and anti-oxidant materials.
5. A coated structure having an aqueous composition according to claim 1 applied on an outer surface of such structure as a film with a thickness of about 4 mils to about 6 mils.
6. A method for decreasing the inner temperature of a structure exposed to solar radiation, comprising applying a coating which comprises an inorganic hygroscopic material, on at least a portion of the exterior surface of at least one of the roofs and walls of such structure as a thin layer having a thickness of about 4 mils to about 6 mils.
7. A method according to claim 6, wherein said inorganic, inert and hygroscopic material is calcined diatomite, diatomaceous earth.
8. A method according to claim 6, wherein said inorganic, inert and hygroscopic material is silica gel.

9. A method according to claim 6, where said hygroscopic material of said coating absorbs water from ambient air and allows evaporation of said water thereby dissipating heat from said roofs or walls.

10. A method according to any of claims 6 to 9, where said coating is manufactured in the form of a paint applicable to at least a portion of at least one of the roofs and walls of a structure chosen from the group consisting of buildings, housings, and other shelters, including offices, silos, warehouses, industrial facilities, ducts, tanks, cold rooms, air cooling equipment, concrete and metallic surfaces.